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TRANSLATION

GLASS LUBRICATION FOR HOT
MACHINING OF METALS

By

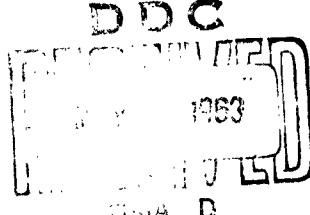
K. L. Kovalev, V. A. Ryabov, I. V. Fomenko, et.al.

FOREIGN TECHNOLOGY DIVISION

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UNEDITED ROUGH DRAFT TRANSLATION

GLASS LUBRICATION FOR HOT MACHINING OF METALS

BY: K. L. Kovalev, V. A. Ryabov, I. V. Fomenko, et. al.

English Pages: 3

SOURCE: Russian Patent Nr. 148190, (Appl. Nr. 743041/23-5, Aug. 29, 1961), pp 1-2

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Date 10 April 19 63

FIRST LINE OF TEXT

Glass Lubrication for Hot Machining of Metals

by

L. K. Kovalev, V. A. Fomenko, V. A. Korobochkon, S. I. Bogatyrev, S. I. Vaslineko, and R. M. Kosul'nikov

Lubricants for hot machining of metals on the basis of glass powder, consisting of silicon oxide, boron oxide, aluminum oxide, calcium oxide, sodium oxide, potassium oxide and water, are known. But the known glass lubs cause carbon deposition on the surfaces of objects.

To eliminate this deficiency is proposed a glass lub, which includes fire resistant clay and soluble glass.

The glass lub consists of (in weight parts) of 85-100 glass powder, 3-10 refractory clay, 3-10 soluble glass and water (for the obtainment of creamy like suspension).

The glass powder included in the glass lub includes (in percentages): 50-65 SiO_2 , 15-20 B_2O_3 , 2-4 Al_2O_3 , 5-7 CaO and 10-14 $\text{K}_2\text{O} + \text{Na}_2\text{O}$.

Variations are caused by technological reasons (granulation, boiling, grinding etc.).

The suspension-lub is applied on cold metal billets, which are then dried, after which they are heated to necessary temperature.

The glass lub on the surface of metal billets melts, and the melted glass forms a thin uniform layer, of low heat conductivity, high wettability and antifrictional properties.

tion quality and produces an insulating layer between the extruded metal and tool.

Press operations with the use of the described lub raises the use of the metal and allows to obtain objects with high surface quality. The lub can be used, e.g. in the manufacture of pipes from stainless 1x18N9T type steel.

Object of invention

Glass lub for hot machining of metals, glass powder base lub, consisting of silicon oxide, boron oxide, aluminum oxide, calcium oxide, sodium and potassium oxides and water, distinguished by the fact, that for the purpose of removing carbon deposition on the surface of the object, the lub includes a refractory clay, soluble glass.

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